Goodfriend Group

WASHINGTON
208 I St., NE
Washington, DC 20002

Ex Parte

September 5, 2019

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: *Unlicensed Use of the 6 GHz Band,* **ET Docket No. 18-295**; *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz,* **GN Docket No. 17-183**; *Amendment of Part 15 of the Commission's Rules for Unlicensed White Space Devices,* **ET Docket No. 16-56 RM-11745**; *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, **GN Docket No. 14-177**

Dear Ms. Dortch:

On Wednesday September 4, 2019 Jeremy Susac, Vice President of Government Affairs for Lennar Homes, ("Lennar") and Lennar representatives David Goodfriend, and DeVan Hankerson, met with Office of Engineering and Technology ("OET") Chief Engineer, Julius Knapp, OET Deputy Chief, Ira Keltz; Policy and Rules Division Chief, Michael Ha; Spectrum Policy Branch Chief, Nicholas Oros, and two additional members of the Spectrum Policy Branch including Electronics Engineer, Barbara Pavon and Bahman Badipour, Ph. D. The purpose of the meeting was to discuss the applicability of the building codes and energy efficiency standards to other wireless dockets.

With respect to the 6 GHz proceeding, the undersigned stated that new home builders care about wifi because home buyers want connected homes. There was discussion about Lennar's WiFi-Certified Home and consumer demand for smart-home connectivity.

The undersigned summarized main points in the comments filed on February 15, 2019. First, modern building codes and energy efficiency standards at the federal and state levels have a direct impact on building entry/exit signal loss (BEL). Over time, the home building community has witnessed that national, state and local building codes have become more stringent in an effort to reduce energy consumption. In order to meet building code energy efficiency standards, home builders integrate "green materials" and better insulating materials.

Second, we noted that the International Telecommunications Union (ITU) studies cited by the FCC in the 6GHz Notice identify certain building materials and techniques that led to reduced BEL in higher

frequencies. These materials include stone, cement and brick, various fenestration elements (double-paned and multiple layers of metal-glazing on windows), and radiant-barrier sheathing elements. The undersigned stated that contemporary federal and state building codes and energy efficiency standards result in greater energy efficiency techniques in new construction year over year. The U.S. Department of Energy's ("D.O.E.") Building Energy Codes program certifies minimum efficiency standards which often are more stringent with each new version of the IECC code. States and municipalities have adopted various editions of the IECC model energy code.

Third, the ever-escalating energy efficiency mandates cause builders to use materials and methods that tend to increase BEL. The undersigned reiterated the high use of radiant-barriers which have been shown to impact signal attenuation. Various insulating techniques and materials like stone and better window insulation incorporating metal-coating, foil-lined sheathing and deeper wall cavities impact BEL.

Greater indoor BEL (signal loss) has implications across numerous issue areas.

Ideally, building codes should include consumer disclosures indicating the impact on BEL so that consumers have options that offer the same efficiency level but different BEL levels. With respect to the further implications of this nexus between the built environment and wireless, the undersigned said that the DOE and other standard-setting bodies should include experts in wireless technology so that decisions about energy efficiency can be informed by experts on wireless propagation.

Finally, the undersigned stated that regardless of the outcome of the 6GHz proceeding, the intersection of building codes and indoor wireless coverage is broadly relevant to a number of wireless dockets and that more inclusive participation of the FCC at the building code-setting level would bring about greater transparency into the process.

Respectfully submitted,

____/s/_____

DeVan Hankerson, Snr. Director Public Policy & Gov't Relations
Goodfriend Group

cc:

Julius Knapp, Chief Engineer, Office of Engineering and Technology
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